

AMENDMENTS AND LISTING OF CLAIMS

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. -- 46. Canceled

47. (New) A supple, globally flexible and locally hard abrasion resistant composite fabric, comprising:

a flexible substrate having an abrasion resistance;

an array of small, generally uniform thickness, non-overlapping, hard, convex geometric-shaped, printed polymer material guard plates arranged in a predetermined pattern and having an area with major and minor dimensions on a substantial portion of a surface of the substrate, the polymer material of the guard plates partially penetrating into the substrate across the entire area of the guard plates to provide a mechanical bond between the guard plates and the substrate to prevent detaching of the guard plates from the substrate when the substrate is flexed, having an area parallel to the substrate with a major dimension to minor dimension aspect ratio between about 3 and 1, wherein a largest distance between adjacent guard plates is less than the lengths of the minor dimensions, the thickness of the guard plates is substantially less than the lengths of the minor dimensions, the minor dimensions are less than about 100 mils, the guard plates are substantially harder than the substrate such that overall flexibility of the composite fabric is substantially determined by the flexibility of the substrate and the distances between the guard plates, and the overall abrasion resistance of the composite fabric is substantially greater than the abrasion resistance of the substrate.

48. (New) The supple, abrasion resistant fabric of claim 47 wherein the guard plates have minor dimensions between about 50 mils and about 100 mils.

49. (New) The supple, abrasion resistant fabric of claim 48 wherein the guard plates have a major dimension to minor dimension aspect ratio between about 2 and 1.

50. (New) The supple, abrasion resistant fabric of claim 48 wherein the guard plates have a major dimension to minor dimension aspect ratio of about 1.

51. (New) The supple, abrasion resistant fabric of claim 47 wherein the largest distance between the guard plates is between about 5 mils and about 15 mils.

52. (New) The supple, abrasion resistant fabric of claim 47 wherein the thickness of the guard plates is between about 5 and about 20 mils.

53. (New) The supple, abrasion resistant fabric of claim 47 wherein:
the guard plates have a major dimension to minor dimension aspect ratio of between
about 2 and 1;
the guard plates have minor dimensions less than or equal to about 100 mils;
the largest distance between the guard plates is less than or equal to about 20 mils;
and
the thickness of the guard plates is less than or equal to about 15 mils.

54. (New) The supple, abrasion resistant fabric of claim 47 wherein:
the guard plates have a major dimension to minor dimension aspect ratio of between
about 2 and 1;
the guard plates have minor dimensions less than or equal to about 80 mils;

the largest distance between the guard plates is less than or equal to about 14 mils;

and

the thickness of the guard plates is less than about 15 mils.

55. (New) The supple, abrasion resistant fabric of claim 47 wherein:

the guard plates have a major dimension to minor dimension aspect ratio of between
about 2 and 1;

the guard plates have minor dimensions less than or equal to about 100 mils;

the largest distance between the guard plates is less than or equal to about 40 mils;
and

the thickness of the guard plates is less than or equal to about 30 mils.

56. (New) The supple, abrasion resistant fabric of claim 47 wherein the polymer
guard plates comprise heat resistant material.

57. (New) The supple abrasion resistant fabric of claim 47 and further including
abrasion resistant additive material in the polymer guard plates.

58. (New) The supple abrasion resistant fabric of claim 47 wherein the guard
plates are formed of cured resin.

59. (New) The supple abrasion resistant fabric of claim 47 wherein the overall
abrasion resistance of the composite fabric is at least twice the abrasion resistance of the
substrate.

60. (New) The supple, abrasion resistant fabric of claim 47 wherein:

the guard plates have a major dimension to minor dimension aspect ratio of between
about 2 and 1;

the guard plates have minor dimensions less than or equal to about 80 mils;

the largest distance between the guard plates is less than or equal to about 50 mils;
and

the thickness of the guard plates is less than or equal to about 15 mils.

61. (New) The supple, abrasion resistant fabric of claim 47 wherein the guard plates have minor dimensions less than or equal to about 80 mils.

62. (New) The supple, abrasion resistant fabric of claim 47 wherein the largest distance between the guard plates is less than or equal to about 50 mils.

63. (New) The supple, abrasion resistant fabric of claim 47 wherein the largest distance between the guard plates is less than or equal to about 20 mils.

64. (New) The supple, abrasion resistant fabric of claim 47 wherein the guard plates are polygon-shaped with all interior angles of the polygons greater than or equal to about 40 degrees.

65. (New) A supple, globally flexible and locally hard abrasion resistant composite fabric, comprising:

a flexible polymer substrate having an abrasion resistance;

an array of small, generally uniform thickness, non-overlapping, hard, convex

geometric-shaped, printed polymer material guard plates arranged in a predetermined pattern and having an area with major and minor dimensions bonded to a substantial portion of a surface of the substrate, having an area parallel to the substrate with a major dimension to minor dimension aspect ratio between about 3 and 1, wherein a largest distance between adjacent guard plates is less than the lengths of the minor dimension, the thickness of the guard plates is substantially less than the lengths of the minor dimensions, the minor dimensions are less than about 100 mils, the guard plates are

substantially harder than the substrate such that overall flexibility of the composite fabric is substantially determined by the flexibility of the substrate and the distances between the guard plates, and the overall abrasion resistance of the composite fabric is substantially greater than the abrasion resistance of the substrate.